# REMARKS

The following remarks are made in response to the Non-Final Office Action mailed February 27, 2007. In that Office Action, the Restriction Requirement mailed September 29, 2006 was made final and claims 14-19, 25, 27, 29-31, 33 and 36 were withdrawn from consideration. Claims 1-13, 20-24, 26, 28, 32, 34, 35 and 37 were rejected under 35 U.S.C. § 103(a) over Greanias et al., U.S. Patent No. 5,386,219 ("Greanias") in view of Saif et al., U.S. Patent No. 6,583,935 ("Saif").

With this Response, claim 38 is newly presented. Claims 1-13, 20-24, 26, 28, 32, 34, 35, 37 and 38 remain pending in the application and are presented for consideration and allowance.

## Restriction Requirement

The Restriction Requirement first imposed in the Official Communication mailed September 29, 2006 was made final in the Office Action (page 2) mailed February 27, 2007. Since the Examiner has made the Requirement final, the claim identifiers for claims 14-19, 25, 27, 29-31, 33 and 36 have been changed to "withdrawn."

However, Applicants maintain the position stated in the Response to Restriction Requirement mailed October 19, 2006 that at least claim 1 is generic. It is also respectfully noted that the Official Communication mailed September 29, 2006 likewise finds claim 1 to be generic (page 4, line 8).

Rule 141(a) provides that more than one species of an invention (not to exceed a reasonable number) may be specifically claimed in different claims of one national application provided that the application includes an allowable claim generic to all claimed species and that all such claims are in dependent form or include all limitations of the generic claim. The restricted claims to be withdrawn from consideration (claims 14-19, 25, 27, 29-31, 33 and 36) are all dependent claims.

Thus, if the Examiner agrees with the position stated below and finds claim 1 to be allowable, it is respectfully requested that the withdrawn claims likewise be deemed allowable pursuant to Rule 141.

**Claim Rejections under 35 U.S.C. § 103(a)**

Claims 1-13, 20-24, 26, 28, 32, 34, 35 and 37 were rejected under 35 U.S.C. § 103(a) as unpatentable over Greanias in view of Saif. The Office Action concedes that Greanias does not disclose a coating substantially covering a substrate where the coating has a refractive index that is less than that of the substrate, and concludes that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Greanias to include a silicon oxide primary layer as disclosed by Saif. We respectfully disagree.

Greanias discloses a touch overlay for a viewing surface of a display that is suited for detecting both finger touches and stylus location. Greanias provides at column 3, lines 25-29 that an object of his invention is to increase the speed of touch detection through the overlay display. Consistent with this, Greanias provides at column 4, lines 12-14 that "The smaller the separation between the finger and conductor, the larger the capacitance change." Beginning at column 17, line 6 Greanias discloses four possible configurations for the overlay. In every configuration the conductor is deposited directly to a substrate. This assertion is supported by Greanias at column 4, lines 33-38: "The transparent conductors may be either disposed on the top surface of a substrate, oriented up and away from the display surface toward the user's finger or on the bottom surface of the substrate, oriented down and toward the display surface."

Saif discloses a touch panel membrane including a substrate 1 as illustrated in each of Figures 5A, 6A, and 7A having an anti-reflective stack coupled to the substrate 1. In general, Saif provides a substrate 1 that is first coated with a hard coat 2, after which the hard coat 2 is coated with a pre-treatment of titanium oxide 4 (known to have a high refractive index of about n=2.4), and these layers are subsequently coated with a silicon oxide primary layer 5. Examples 1-6 (Saif at columns 6-9) for Figures 1-7 each requires a hard coat 2 to be applied to sides of substrate 1. The hard coat 2 is deposited to have a thickness of about 3 to 4 micrometers (column 6, lines 23-27). The drawings show that whenever a low index silicon oxide layer is deposited, it is first preceded by a pre-treatment of titanium oxide (known by those of skill in the art to have a high index, n~2.4).

Directly contrary to the teaching of Greanias, Saif distinguishes prior art structures having conductors applied directly to substrates (Figure 8B) as having undesirably higher reflectances than the "proposed invention" shown in Figure 8A that includes a high index titanium dioxide layer 6' coated on substrate 1. *See* Saif at column 9, lines 21-46.

Contrary to both references, the claimed touch screen increases light transmission and decreases reflections (*Specification* at page 4, lines 9-15) and each pending claim requires a coating substantially covering a substrate, where the coating has a refractive index that is less than the substrate.

The pending claims cannot be rendered obvious over Greanias in view of Saif since Saif teaches away from the deposition of conductors onto a substrate, as required in every configuration disclosed by Greanias. Greanias is directed to increasing the speed of touch detection on an overlay display, and achieves this by depositing a conductor directly onto a substrate and minimizing the separation between the finger and conductor. Saif, in contrast, discloses a low reflectance touch panel membrane fabricated by pre-treating a substrate with either a hard coat (Figures 1-7) or high index titanium dioxide (Figure 8A "Proposed Invention"). Saif teaches away from combination with Greanias such that one of skill in the art would not look to Saif if one of skill in the art were ever motivated to modify Greanias.

Additionally, the coatings applied to the substrate in Saif do not have a refractive index that is less than that of the substrate. In particular, although Saif is silent as to the composition of hard coat 2 applied to substrate 1, Saif requires titanium oxide pre-treatment layer 4' (Saif Examples 1-6) to be deposited onto hard coat 2 ahead of silicon oxide primer layer 5'. The refractive index of titanium oxide is substantially larger (n~2.4) than the refractive index of the substrate (polyester-column 6, line 24). Consequently, even if the references were to be combined, the resulting structure would either require conductors applied directly to the substrate (as required by Greanias), or a higher index coating applied to the substrate structure (as required by Saif). The purported combination would not result in a coating substantially covering a substrate, where the coating has a refractive index that is less than the substrate, as required by the pending claims.

The Office Action takes the position at page 5 that Saif provides evidence for those of skill in the art to find a reason, suggestion, or motivation to add a coating of silicon oxide that has a refractive index of less than the substrate. We disagree that this reasoning renders the claimed subject matter *prima facie* obvious for the following reasons.

Recently, the Supreme Court offered guidance on how references should be viewed when conducting an obviousness determination. The Supreme Court's position is: "[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR Int'l Co. v. Teleflex, Inc. et al.*, 550 U.S.___ (2007) (Slip Opinion, pg. 14, B, *emphasis added*). In making this point, the Court noted that it is "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed invention does." *KSR,* Slip Opinion, pg. 15, lines 1-4 (*emphasis added*). Merely identifying a touch panel membrane having a silicon oxide layer somewhere within a stack of the laminate does not render the claimed touch panel structure obvious. Greanias attaches both the horizontal and vertical conductors directly to the substrate. Saif's high index titanium oxide pre-treatment layer is deposited onto substrate 1 before the silicon oxide layer. Thus, nothing in the cited references renders obvious a coating substantially covering a substrate, where the coating has a refractive index that is less than that of the substrate.

In addition, the Court in *KSR* offers this reminder: "A fact finder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning." *KSR*, Slip Opinion, pg. 17 last paragraph (citing to *Graham,* 38 U.S. 1, 36 in warning against a temptation to read into the prior art the teachings of the invention at issue and instructing courts to guard against slipping into the use of hindsight). In this regard, theorizing that the silicon oxide primer layer 5' of Saif could possibly be combined with the disclosure in Greanias to arrive at a silicon oxide coating substantially covering the Greanias substrate is believed to be based entirely on hindsight bias, particularly since Greanias specifically provides for depositing all horizontal and vertical conductors directly onto a substrate.

In any regard, even if the disclosure of Greanias is modified according to the disclosure of Saif, the resulting structure fails to provide a coating substantially covering a substrate, where the coating has a refractive index that is less than that of the substrate as claimed. The Examiner concedes at page 4 of the Office Action that Greanias does not disclose such a structure. Saif does not disclose such a structure, and in fact teaches a diametrically opposed structure having a coating on a substrate with a refractive index that is substantially larger than the refractive index of the substrate.

Independent claim 1 requires a touch screen having a coating substantially covering a substrate, where the coating has a refractive index that is less than that of the substrate and less than that of a transparent conductor pattern disposed on the coating. Based on the above, it is believed that independent claim 1 recites patentable subject matter over the cited references. It is respectfully requested that the rejection to independent claim 1 under 35 U.S.C. § 103 over Greanias in view of Saif be withdrawn, and that claim 1 and its dependent claims 2-13, 20-24, 26 be allowed.

Independent claim 28 requires a PET substrate, **a silicon oxide layer covering the PET substrate**, an array of parallel ITO bars disposed on the silicon oxide layer, and an optically clear pressure sensitive adhesive disposed over and covering the ITO bars. The cited references, even if impermissibly combined, fail to render this claimed structure obvious. Thus, it is respectfully requested that the rejection to independent claim 28 under 35 U.S.C. § 103(a) over Greanias in view of Saif be withdrawn.

Independent claim 32 provides a touch screen including a transparent conductor patterned on a substrate, a first layer substantially covering the substrate and **disposed between the transparent conductor and the substrate**, and a second layer disposed to contact the transparent conductor in areas covered by the transparent conductor and to contact the first layer in areas uncovered by the transparent conductor, where **the first layer** is configured to increase visible light transmission through the touch screen in areas covered by the transparent conductor. Greanias fails to provide a first layer substantially covering the substrate. Saif provides a first layer of hard coat substantially covering the substrate, but the hard coat is not configured to increase visible light transmission through the touch screen. The cited references, even if impermissibly combined, fail to render the claimed structure of claim 32 obvious. Newly presented claim 38 further defines patentably distinct independent claim 32. Thus, it is respectfully requested that the rejection to independent claim 32 under 35 U.S.C. § 103(a) over Greanias in view of Saif be withdrawn, and claims 32, 34 and 38 be allowed.

Independent claim 35 provides a method for reducing the visibility of a patterned transparent conductor in a touch screen including coating an undercoat material between a substrate and the patterned transparent conductor so that **the undercoat material substantially covers the substrate, where the undercoat material has a refractive index that is less than**

**that of the substrate**. The cited references, even if impermissibly combined, fail to render the claimed structure of claim 35 obvious. Thus, it is respectfully requested that the rejection to claim 35 under 35 U.S.C. § 103(a) over Greanias in view of Saif be withdrawn, and claims 35 and 37 be allowed.

## CONCLUSION

Applicant respectfully submits that pending claims 1-13, 20-24, 26, 28, 32, 34, 35, 37 and 38 recite patentable subject matter, are in form for allowance, and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-13, 20-24, 26, 28, 32, 34, 35, 37 and 38 is requested.

In view of the above, it is submitted that the application is in condition for allowance.

Respectfully submitted,

May 18, 2007
Date

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